

2 --FIG. 48 is an enlarged schematic view showing the relationship between the radial position of a forming punch and the deformation of a die in a forming process; and--

Please insert the following paragraph on page 27, after line 6:

3 --FIG. 49 is a table and illustration providing aspect ratio representing the spherodized ratio of carbide for materials 1, 2, and 3.--

Please replace the paragraph beginning at page 34, line 8, with the following rewritten paragraph:

4 --As shown in FIG. 49, the aspect ratio ($b/l \times 100$) representing the spherodized ratio of carbide in each of the materials was 506 % for the material 1, 347 % for the material 2, and 300 % for the material 3.--

Please delete the heading at page 34, line 20.

Please replace the paragraph beginning at page 35, line 1, with the following rewritten paragraph:

5 --In order to confirm the effectiveness of the material constituents according to the present invention, the results of an upsetting test are shown in Table 1 below. The upsetting ratio was 90 %, and the materials (billets) used in the upsetting test were spherodized before and after being drawn.--

Please replace the heading at page 35, line 7, with the following rewritten heading:

--Table 1--

Please replace the paragraph beginning at page 42, line 18, with the following rewritten paragraph:

6 --Table 2 shown below indicates the results of an upsetting test and a crankshaft forming test on different materials and spherodizing processes.--

Please replace the heading at page 43, line 5, with the following rewritten heading:

--Table 2--

Please replace the paragraph beginning at page 43, line 6, with the following rewritten paragraph:

97 --It has been confirmed from Table 2 that the billet processed by the method according to the third invention did not crack as with the billet which was subjected to spheroidizing annealing before and after being drawn.--

Please replace the paragraph beginning at page 43, line 11, with the following rewritten paragraph:

98 --In Table 2, the R material is a material that is air-cooled by the cooling bed, rather than being quenched, and the controlled rolling material is of a fine alpha structure produced by strictly controlling hot rolling conditions. Since the R material, even if annealed, tends to crack upon being forged, it has heretofore been customary to use the controlled rolling material. However, it can be seen that the controlled rolling material is caused to crack if it has been annealed once. It can also be seen that no cracking occurs if the material is annealed before and after being drawn, and the surface-hardened steel according to the present invention is not caused to crack even if it has been annealed once.--

Please replace the paragraph beginning at page 55, line 10, with the following rewritten paragraph:

99 --Crankshaft were cold-forged using a carbon steel having the composition shown in Table 3 below, and aged for various heating times shown in Table 4. The crankshafts were measured for surface (HRC) prior to the aging, surface hardness (HRC) subsequent to the aging, and internal hardness (HRC), and analyzed for metal crystal lattice constants by way of x-ray diffraction.--

Please replace the paragraph beginning at page 55, line 18, with the following rewritten paragraph:

610 --The temperature of the aging process was 300° C, and No. A in Table 4 was not subjected to the aging process.--

Please replace the heading at page 55, line 21, with the following rewritten heading:

--Table 3--

Please replace the heading at page 55, line 22, with the following rewritten heading:

--Table 4--

Please replace the paragraph beginning at page 56, line 1, with the following rewritten paragraph:

911 --The correlations between the hardnesses (HRC) prior and subsequent to the aging process and the average lattice constants were compared with each other. The results are shown in Table 5. It is found that the greater the average lattice constant (d value), the higher the hardness (HRC).--

Please replace the heading at page 56, line 7, with the following rewritten heading:

--Table 5--

Please replace the paragraph beginning at page 57, line 10, with the following rewritten paragraph:

912 --The foregoing effect is clearly seen from the analyzed results shown in Table 3 - Table 5. In Table 5, the hardness is small in increase at items below No. C (aging time: 1.0 H), reaches its peak between No. D and No. F (aging time: 1.5 to 2.5 H), and is reduced due to excessive aging at No. G (aging time: 4 H).--

Please replace the paragraph beginning at page 57, line 22, with the following rewritten paragraph: